

**WHAT IS CLAIMED IS:**

1. An electrical connector for connecting to a plug having a plurality of electrical contacts, the connector comprising:

- 5           a) a plurality of first and second metallic spring contacts, each of the first and second spring contacts including:
- 1) a circuit board connection end for connecting to a circuit board;
  - 2) a first longitudinally extending section;
  - 3) a main bend section;
  - 10           4) a second longitudinally extending section engageable with a contact of the plug, wherein the first longitudinally extending section, the main bend section, and the second longitudinally extending section define a general V-shape;
- b) the second longitudinally extending section of the first spring contacts having two linear portions joined at a bend portion;
- 15           c) the second longitudinally extending section of the second spring contacts extending linearly;
- d) a dielectric contact housing for holding the spring contacts, wherein the contact housing defines an x-axis, a y-axis and a z-axis, the contact housing configured for receipt of the plug in a direction of the x-axis, wherein the first and
- 20           second spring contacts are arranged such that:
- 1) the first and second spring contacts alternate along the z-axis;
  - 2) the first longitudinally extending section of the first spring contacts are in a plane displaced along the y-axis from a plane defined by the first longitudinally extending section of the second spring contacts;
  - 25           3) the main bends of the first spring contacts are displaced along the x-axis from the main bends of the second spring contacts.

2. The connector of claim 1, further comprising a printed circuit board mounted to the first and second spring contacts at the printed circuit board connection

30           ends.

3. The connector of claim 2, wherein the printed circuit board defines a plane parallel to the x and z-axes.

4. The connector of claim 2, wherein the printed circuit board defines a plane parallel to the y and z axes.

5. The connector of claim 4, wherein the contact housing includes a base for receiving each of the first longitudinally extending sections of the first and second spring contacts, wherein the base defines at least one channel extending in the direction of the x-axis between the first longitudinally extending sections of the first spring contacts and the first longitudinally extending sections of the second spring contacts.

6. The connector of claim 3, wherein the contact housing includes a base having a divider extending from a top surface, the divider defining a plurality of alternating first and second channels, each of the first and second channels receiving one of the first and second spring contacts, the first channels extending at an angle to the x and y-axes, the second channels extending parallel to the x-axis.

7. An electrical connector for connecting to a plug having a plurality of electrical contacts, the connector comprising:

a) a plurality of first and second metallic spring contacts, each of the first and second spring contacts including:

1) a circuit board connection end for connecting to a circuit board;  
2) a first longitudinally extending section;  
3) a main bend section;  
4) a second longitudinally extending section, the first longitudinally extending section, wherein the main bend section, and the second longitudinally extending section define a general V-shape;

b) a dielectric contact housing for holding the spring contacts, wherein the contact housing defines an x-axis, a y-axis and a z-axis, the contact housing configured for receipt of the plug in a direction of the x-axis, wherein the first and second spring contacts are arranged such that:

1) the first and second spring contacts alternate along the z-axis;

- 2) the first longitudinally extending section of the first spring contacts are in a plane displaced along the y-axis from a plane defined by the first longitudinally extending section of the second spring contacts;
- 3) the contact housing including a base for receiving each of the first
- 5 longitudinally extending sections of the first and second spring contacts, wherein the base defines at least one channel extending in the direction of the x-axis between the first longitudinally extending sections of the first spring contacts and the first longitudinally extending sections of the second spring contacts.